

AMENDMENTS TO THE CLAIMS:

This listing of claims replaces all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method comprising:

of exchanging information between a control element (CE) and one or more forwarding element (FEs), the method exchanging comprising:

executing a binding phase between the CE and a first one of FEs to provide a data channel and a control channel separate from the data channel between the CE and a first one of the FEs, the data channel configured to transport packets including at least one of redirected packets from the first one of the FEs to the CE and packets to be forwarded from the CE to a second one of the FEs, ~~the binding phase further to provide a control channel between the CE and the first one of the FEs, the control channel configured to transport control and configuration messages and wherein said control channel is separate from said data channel;~~

executing a capability discovery phase between the CE and the first one of the FEs, the capability discovery phase comprising:

transmitting a capability request from the CE to the first one of the FEs;

transmitting a topology request from the CE to the first one of the FEs;

and

executing a configuration operation phase between the CE and the first one of the FEs,

wherein said executing a binding phase further comprises:

transmitting a bind request, from the first one of the FEs to the CE, to establish the data channel and the control channel[[,]]; and

~~wherein said executing a binding phase further comprises~~ transmitting a bind response, from the CE to the first one of the FEs after the first one of the FEs has received the bind request, the bind response indicating whether the data channel and the control channel are established.

2. (Currently Amended) The method of claim 1 wherein the exchanging further comprising executing an unbind phase between the CE and the first one of the FEs, wherein the unbind phase includes one of the CE and the first one of the FEs sending an unbind message to the other to cease association.

Claims 3 and 4 (Cancelled)

5. (Currently Amended) The method of claim 1 wherein said executing a capability discovery phase comprises:

~~at least one of transmitting a capability request from the CE to the first one of the FEs, transmitting a topology request from the CE to the first one of the FEs, and receiving a capability response from the first one of the FEs in response to the capability request;~~

receiving a topology response from the first one of the FEs in response to the topology request; and

determining whether to transmit ~~transmitting~~ a start FE operation message from the CE to the first one of the FEs based on the capability response and the topology response.

Claim 6 (Cancelled)

7. (Currently Amended) The method of claim 1 wherein said executing a configuration operation phase comprises:

~~at least one of transmitting a configuration request from the CE to the first one of the FEs[.,.]; and~~

transmitting a query request from the CE to the first one of the FEs.

8. (Currently Amended) The method of claim 7 wherein said executing a configuration operation phase further comprises:

~~at least one of transmitting a configuration response from the first one of the FEs to the CE after the first one of the FEs has received said configuration request[.,.];~~

transmitting a query response from the first one of the FEs to the CE after the first one of the FEs has received said query request[[,]]:

transmitting an FE event notification message from the first one of the FEs to the CE; and

transmitting an FE packet redirection message from the first one of the FEs to the CE.

9. (Original) The method of claim 1 wherein said messages are provided having an eight-byte header.

10. (Original) The method of claim 1 wherein said messages are provided having a variable length payload.

11. (Currently Amended) A network element module comprising:
a control element (CE);
a plurality of forwarding elements (FEs); and
an interconnect in communication with said CE and said plurality of FEs and wherein communication across said interconnect between the CE and the FE is accomplished by executing instructions causing a machine to result in the following:

~~executing execute a binding phase between the CE and a first one of the FEs to provide a data channel and a control channel separate from the data channel between the CE and a first one of the FEs, the data channel configured to transport packets including at least one of redirected packets from the first one of the FEs to the CE and packets to be~~

forwarded from the CE to a second one of the FEs, ~~the binding phase further to provide a control channel between the CE and the first one of the FEs, the control channel configured to transport control and configuration messages and wherein said control channel is separate from said data channel;~~ ~~executing execute~~ a capability discovery phase between the CE and the first one of the FEs, the capability discovery phase comprising:

transmitting a capability request from the CE to the first one of the FEs;
transmitting a topology request from the CE to the first one of the FEs; and
executing execute a configuration operation phase between the CE and the first one of the FEs,

wherein ~~said~~ executing a binding phase further comprises:

transmitting a bind request, from the first one of the FEs to the CE, to establish the data channel and the control channel~~[,]~~; and
~~wherein said executing a binding phase further comprises~~ transmitting a bind response from the CE to the first one of the FEs after the first one of the FEs has received the bind request, the bind response indicating whether the data channel and the control channel are established.

12. (Currently Amended) The network element module of claim 11 wherein said communication further comprises executing an unbinding phase between the CE and the first one of the FEs,

wherein the unbind phase includes one of the CE and the first one of the FEs sending an unbind message to the other to cease association.

Claims 13 and 14 (Cancelled)

15. (Currently Amended) The network element module of claim 11 wherein said capability discovery phase comprises:

~~at least one of a capability request sent from the CE to the first one of the FEs, a topology request sent from the CE to the first one of the FEs, and~~
receiving a capability response from the first one of the FEs in response to the capability request;

receiving a topology response from the first one of the FEs in response to the topology request; and

determining whether to transmit a start FE operation message sent from the CE to the first one of the FEs based on the capability response and the topology response.

Claim 16 (Cancelled)

17. (Currently Amended) The network element module of claim 11 wherein said configuration operation phase comprises: ~~at least one of~~
a configuration request sent from the CE to the first one of the FEs[[],]; and

a query request sent from the CE to the first one of the FEs.

18. (Currently Amended) The network element module of claim 17 wherein said configuration operation phase further comprises:

at least one of a configuration response sent from the first one of the FEs to the CE after the first one of the FEs has received said configuration request[[],,];

a query response sent from the first one of the FEs to the CE after the first one of the FEs has received said query request[[],,];

an FE event notification message sent from the first one of the FEs to the CE; and

an FE Packet redirection message sent from the first one of the FEs to the CE.

19. (Original) The network element module of claim 11 wherein said messages are provided having an eight-byte header.

20. (Original) The network element module of claim 11 wherein said messages are provided having a variable length payload.

21. (Currently Amended) An article comprising:
a storage medium having stored thereon instructions causing that when executed by a machine to result in the following:

executing execute a binding phase between the CE and a first one of the FEs to provide a data channel and a control channel separate from the data channel ~~between the CE and a first one of the FEs~~, the data channel configured to transport packets including at least one of redirected packets from the first one of the FEs to the CE and packets to be forwarded from the CE to a second one of the FEs, ~~the binding phase further to provide a control channel between the CE and the first one of the FEs~~, the control channel configured to transport control and configuration messages ~~and wherein said control channel is separate from said data channel~~;

executing execute a capability discovery phase between the CE and the first one of the FEs, the capability discovery phase comprising:

transmitting a capability request from the CE to the first one of the FEs;
transmitting a topology request from the CE to the first one of the FEs; and
executing execute a configuration operation phase between the CE and the first one of the FEs[[;]],

wherein executing a binding phase further comprises:

~~causing a processor to transmit~~ transmitting a bind request, from the first one of the FEs to the CE, to establish the data channel and the control channel; and
~~causing a processor to transmit~~ transmitting a bind response from the CE to the first one of the FEs after the first one of the FEs has received said bind request, the bind response indicating whether the data channel and the control channel are established.

22. (Currently Amended) The article of claim 21, further comprising instructions for causing a machine processor to execute an unbind phase between the CE and the first one of the FEs,

wherein the unbind phase includes one of the CE and the first one of the FEs sending an unbind message to the other to cease association.

Claims 23 and 24 (Cancelled)

25. (Currently Amended) The article of claim 21, further comprising instructions for causing a machine processor to:

~~execute at least one of transmit a capability request from the CE to the first one of the FEs, transmit a topology request from the CE to the first one of the FEs, and~~

receive a capability response from the first one of the FEs in response to the capability request;

receive a topology response from the first one of the FEs in response to the topology request; and

determine whether to transmit a start FE operation message from the CE to the first one of the FEs based on the capability response and the topology response.

Claim 26 (Cancelled)

27. (Currently Amended) The article of claim 21, further comprising instructions for causing a machine processor to:

execute at least one of transmit a configuration request from the CE to the first one of the FEs[[],]; and

transmit a query request from the CE to the first one of the FEs.

28. (Currently Amended) The article of claim 27, further comprising instructions for causing a machine processor to:

~~execute at least one of~~ transmit a configuration response from the first one of the FEs to the CE after the first one of the FEs has received said configuration request[[],];

transmit a query response from the first one of the FEs to the CE after the first one of the FEs has received said query request[[],];

transmit an FE event notification message from the first one of the FEs to the CE; and

transmit an FE Packet redirection message from the first one of the FEs to the CE.

29. (Currently Amended) The article of claim 21, further comprising instructions for causing a machine processor to provide said messages having an eight byte header.

30. (Currently Amended) The article of claim 21, further comprising instructions for causing a machine processor to provide said messages having a variable length payload.